



## ***What's Going on Today?***

	1982	Today
<b>Number of claimants</b>	21,000	600,000
<b>Number of defendants</b>	300	6,000
<hr/>		
<b>Total costs to date (nominal \$)</b>	\$1 B	\$54 B
<hr/>		
<b>Bankruptcies</b>	3	60
<hr/>		
<b>Estimated future costs (nominal \$)</b>	\$38 B	?

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## ***Dimensions of the Litigation***

- Claims
- Costs and compensation
- Economic effects
- • Future outlook

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## ***The Future Course of Litigation Is Uncertain***

- Analysts' projections of total claimants and costs vary dramatically
  - Total claimants: 1 million to 3 million
  - Total costs: \$200 billion to \$265 billion
- Whether there will be money left to pay future claimants—and who will pay—remain open questions

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What might the future hold? The history of asbestos litigation has been characterized by failures to estimate its magnitude, scope, and evolution with any accuracy. For example, as noted above, RAND's report on the status of the litigation in 1982 (Kakalik, et al., 1983) observed that respected analysts were predicting that the future costs of asbestos litigation could reach \$38 billion. Among the participants in the litigation whom we have interviewed to date—most of whom have been involved in the litigation for more than a decade—there is no agreement about whether the litigation is approaching its end or will continue to grow or change in character.

Analysts' projections of the numbers of future claims and their likely costs also vary dramatically. Analysts at Tillinghast-Towers Perrin project an ultimate total of 1 million claims, costing defendants and insurers \$200 billion (Angelina and Biggs, 2001). Analysts at Milliman project a total of 1.1 million claims, but they estimate that the total costs of asbestos personal injury claims will reach \$265 billion (Bhagavatula, Moody & Russ, 2001).

The Manville Trust commissioned a deliberately high-side estimate designed to set an upper boundary on what would happen if everything turned out to be as bad as it could get. The estimate was 3 million total claimants, which means the process is only about one-fifth finished (Austern, June 21, 2001). The Trust did not attempt to estimate what the high estimate of the number of claimants would imply for the total costs of asbestos litigation.

The large variation in the projections of future claims and costs reflects recent changes in the litigation: sharp increases in both the numbers of claims filed and in the fraction of new claims submitted for nonmalignant conditions, particularly by unimpaired claimants, and rapidly rising costs of settling mesothelioma claims. There has also been a dramatic increase in the number of firms filing for Chapter 11. Analysts differ in their assumptions about the implications of these changes for the future course of the litigation.

However, the differences among these projections and the question of which is more likely to be accurate is not the important issue. The projections vary, but they do agree that the litigation is far from over. It is possible that millions of claims have yet to be made. We estimate that defendants and insurers have spent \$54 billion through the end of 2000 to compensate the 600,000 claimants who have come forward. Thus, these projections imply that we have seen only about half of the claims and roughly one-fourth to one-fifth of the eventual costs. Regardless of the differences among the various projections, they all suggest that, at best, only about half the final number of claimants have come forward and, possibly, only a fifth. As for total costs, the estimates suggest they will eventually amount to three to four times the money that has already been spent on the litigation. That is a staggering figure—\$145 to \$210 billion—and it raises the fundamental question of whether there is going to be enough money to pay future claims.



## **Will There Be Enough Money for Future Claimants?**

<i>Example of Johns-Manville raises doubts</i>		Compensation as percent of liquidated value
<b>1988</b>	<b>Trust payments began</b>	<b>100%</b>
<b>1990</b>	<b>Payments suspended</b>	<b>(Only exigent cases paid)</b>
<b>1995</b>	<b>Payments resumed</b>	<b>10%</b>
<b>2001</b>	<b>Payment plan revised</b>	<b>5%</b>

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Increases in claim filings and the recent surge of bankruptcies, combined with the failure of efforts to attain “global” settlements in the courts, have heightened some plaintiff attorneys’ concerns about the compensation prospects for future asbestos injury victims. In our interviews, attorneys who represent mesothelioma and other cancer victims were most prone to raise these concerns. The history of the litigation against the Johns-Manville Corporation and the Trust that was established as a result of its reorganization starkly illustrates the basis for this concern.

Johns-Manville filed for Chapter 11 in 1982. Its reorganization plan created a trust that would pay future claimants the compensation due them from the Johns-Manville Corporation (Matter of Johns-Manville Corp., 68 B.R. 618 [Bankr. S.D.N.Y. 1986], aff’d in part, rev’d in part, Kane v. Johns-Manville Corp., 843 F.2d 636 [2<sup>nd</sup> Cir. 1988]). The amount due a claimant, or its liquidated value, was determined by an administrative schedule (termed a “matrix”) established when the bankruptcy reorganization plan was approved. Under the reorganization plan, the Trust was to compensate all future claimants for 100 percent of the liquidated value of their claims against Johns-Manville. The Trust began to pay claims in 1988.

Within two years the Trust had paid out so much money that there were serious doubts about its future solvency (Smith, 1990). In 1990, Judge Jack Weinstein

ordered the Trust to cease payments to all but exigent cases, pending a review of its financial prospects. After extensive expert analyses, a new plan was drawn up under which the Trust was to pay all claims against Manville expected to arise thereafter, but at the much reduced rate of 10 cents on the dollar. In 1995, a new reorganization plan was approved by Judge Weinstein (*in re Joint Eastern and Southern Districts Asbestos Litigation*, 878 F. Supp. 473 [E.D.N.Y. 1995], aff'd in part, vacated in part, 78 F.3d 764 [1996]). Although appeals were pending, the Trust resumed payments to claimants at a rate of 10 percent of the liquidated value of the claims. Payments continued at this rate for six years.

Claims filed with the Manville Trust soared in the last half of 2000 and into the first half of 2001. As a result, demands on the Trust exceeded expectations and again threatened its long-term fiscal prospects. The Trust commissioned several different projections of likely future claim filings. Different consultants, each of whom has extensive previous experience in the asbestos arena, examined the trends in claims filings and the available epidemiological models. In a letter to Manville Trust claimants, the Trust's CEO noted that the consultants now predict that the Trust will receive 1.5 million additional claims and could possibly see as many as 2.5 million additional claims (Austern, 2001a). In July, 2001, after analyses of these recent filing trends, the CEO of the Trust announced that, pending resolution of any controversy concerning the amount of the pro rata share, the Trust would henceforth pay claims at the rate of 5 cents on the dollar (Austern, 2001b).

The Manville Trust's experience has been replicated in the other trusts established to provide asbestos claimants the compensation due them from a defendant who filed for bankruptcy. In 2001, the Eagle-Pitcher Trust paid claimants 15.5 percent of the liquidated value of their claims. The corresponding pro-rata payment ratios for the Celotex and UNR Trusts were 10 percent and 7.5 percent, respectively (Claims Resolution Management Corporation, 2001, p. 26).



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## *Outline*

- **How did we get here?**
- **Where are we today?**
- **Is there a better way?**

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With the rapid growth in asbestos filings and costs, asbestos litigation has become a pressing policy concern. Many people question whether compensation is being divided among claimants fairly and in proportion to need, and whether responsibility for paying compensation is being allocated among defendants fairly and in proportion to culpability. Moreover, the current system is costly to administer, imposes substantial indirect costs on the economy, and may leave little or no funds available to pay future asbestos victims. Are there alternative strategies for compensating victims of asbestos disease that would be more effective, efficient, and equitable for all involved?



## **Tort System Has Three Major Objectives**

- Compensation
- Deterrence
- Individualized justice

A3823-83 08/02 RAND

As a background for considering alternatives to the current asbestos litigation regime, we need to consider the theoretical rationale for continuing to rely on the tort liability system and empirical research on the tort liability process and outcomes. Traditionally, the tort system in the United States has been viewed as having three objectives: compensation, deterrence, and individualized corrective justice (e.g., Schwartz, 1997; Keating, 2000). In theory, the system properly calibrates defendants' incentives to avoid injuring others, properly compensates injury victims for their losses, and provides a sense that "justice has been done" through individualized consideration of each plaintiff's and defendant's situation.

However, empirical studies conducted by RAND and others over the past several decades have shown that the tort system often falls short of these goals (Hensler et al., 1991; Kakalik & Pace, 1986; Shanley & Peterson, 1983). It is often difficult for individuals with meritorious claims for minor injuries to find representation because their cases require a significant investment of time and expense and offer limited potential damages in return. Although plaintiffs with substantial injuries and viable claims are likely to find legal representation, their compensation may be limited by a variety of factors, including the defendant's ability to pay and both the plaintiff's and plaintiff attorney's risk aversion.

When cases are pursued to trial, juries may award damages that reflect their perceptions of defendants' resources in addition to their assessment of

defendants' culpability, or they may make judgments about causation that are scientifically questionable (Chin & Peterson, 1985; Ostrom et al., 1992 and 1996; Diamond, Saks & Landsman, 1998). And most litigants find little in the way of individualized treatment or procedure (Hensler, 1998).



## **How Does Asbestos Compensation System Measure up?**

### **Compensation**

- **Provides access to all claimants without regard to whether they are currently impaired**
- **But**
  - **Dilutes resources available to pay the most seriously impaired**
  - **Jeopardizes compensation of those who become impaired in the future**

A3823-85 08/02 RAND

Ordinarily, only a small fraction of all those who are injured seek compensation from the courts (Hensler et al., 1991). Typically, the high costs of tort litigation screen out of the system the majority of claims for minor injuries and modest losses. In asbestos litigation, however, mass litigation strategies have effectively opened the courts to everyone who alleges that they were exposed to asbestos and incurred some injury, without regard to whether and to what degree they are functionally impaired and sometimes without much attention to the strength of their evidence of exposure.

Questions about the equity of the allocation of damages to different categories of asbestos claimants abound. It is widely asserted that plaintiff attorneys who represent plaintiffs with different levels of injury negotiate settlement agreements that “discount” the value of the most serious injury claims in exchange for receiving modest payments for large numbers of non-impaired plaintiffs with no functional impairments (Hensler et al., 1985). These practices were sharply criticized in the controversy over the proposed class settlements of future claims (Amchem v. Windsor, 521 U.S. 591 [1997]; Ortiz v. Fibreboard Corp. 527 U.S. 815 [1999]; Symposium, [1995]). Jury verdicts for cancer victims have risen sharply in the last few years, and attorney interview data suggest that settlement values for these most serious injury claims have increased in response. But aggregative practices continue (Hensler, 2002).

How to deal with future claimants has challenged litigators and jurists alike (Cole, 1999). Some believe that provisions should be made for those who will

come forward in the future with very serious asbestos injury claims by limiting payment to current claimants with legally cognizable injuries but no functional impairment. Others argue that it would be inappropriate to modify traditional tort doctrine for asbestos victims. With increasing numbers of bankruptcies, bankruptcy trusts have proliferated. Under a special provision of bankruptcy law (11 U.S.C. § 524[g]), the trusts deal with the issue of future claimants by paying everyone who files a claim the same proportion of their liquidated claim value, without regard to injury severity. As a result, those with the largest losses receive the same fractional compensation as those with very modest losses. As claims against the trusts mount, in some instances that fraction has become vanishingly small.



## ***How Does the Asbestos Compensation System Measure up?***

### ***Deterrence***

- **Forces culpable companies to pay large damages to injured workers**
- **But**
  - **As litigation spreads, less culpable companies are drawn into process**

A3823-87 08/02 RAND

The historical case against asbestos manufacturers has been widely discussed in articles and books about the inception of the litigation (Brodeur, 1985; Castleman, 1996). Companies like Johns-Manville were central to this history, as were some of the other asbestos product manufacturers that were the prime targets of litigation through the 1980s. But as the litigation has spread to companies outside the asbestos and building products industries, the culpability of the defendants called upon to pay asbestos victims is in more dispute.

In this context, the issue is not *whether* asbestos victims should be able to receive compensation from some entity, but rather *what entity* should fairly be called upon to shoulder the financial burden. Requiring companies that played a relatively small role in exposing workers to asbestos to bear substantial costs of compensating for asbestos injuries not only raises fundamental questions of fairness but undercuts the deterrence objectives of the tort system. If business leaders believe that tort outcomes have little to do with their own behavior, then there is no reason for them to shape their behavior so as to minimize tort exposure.



## ***How Does the Asbestos Compensation System Measure up?***

### ***Individualized Justice***

- In theory, provides individualized process through the tort system
- **But**
  - In practice, mass processing allows little or no individual treatment
    - in court processes
    - in bankruptcy claims processes

A3823-88 08/02 RAND

In principle, the tort system promises individualized justice to plaintiffs and defendants. Empirical research suggests that individualized treatment satisfies people's desire for procedural fairness, which in turn leads to trust in the justice system (Tyler, 1990). In practice, tort litigation often offers little individualized treatment in ordinary or mass litigation (Hensler, 1995 and 1998). In asbestos litigation, individualized process is a chimera.



## **Policy Alternatives**

- **Maintain status quo**
- **Rely on bankruptcy system to deliver compensation and accept limits on payments**
- **Change substantive doctrine**
  - **Redefine “injury” to require some functional impairment**
  - **Limit liability in some circumstances**
- **Create administrative compensation program**

A3823-89 08/02 RAND

Notwithstanding the criticisms of our current asbestos litigation regime, many argue that it is the best feasible approach to assuring compensation for the thousands of workers who were injured as a result of exposure to asbestos. These supporters of the status quo argue that there are no other sources of compensation for injured workers on the horizon and that the corporations that are shouldering the financial burden of compensation benefited (along with their shareholders) from their past activities and are now properly called upon to pay the costs of those activities. Moreover, they say, changing substantive tort doctrine and procedural rules for asbestos injuries would be unfair to workers exposed to asbestos and set an unwise precedent for tort compensation generally.

Experience suggests that maintaining the status quo means assigning a substantial compensation role to bankruptcy trusts. The bankruptcy statute now provides for payment of future claimants under bankruptcy reorganization plans (11 U.S.C. § 524[g]), and the allocation of funds between current and future claimants is hotly negotiated during the bankruptcy reorganization process. Some commentators have suggested that policymakers should look to bankruptcy reorganization as the *main* vehicle for compensation for mass torts generally, and for asbestos in particular. By adopting streamlined claims processing procedures and, in some instances, limiting attorney fees, bankruptcy trusts have substantially reduced transaction costs for resolving asbestos claims. But these benefits come at a high price for asbestos plaintiffs, who typically

receive only a tiny fraction of their claim's litigation value and for investors whose equity often disappears entirely as a result of bankruptcy reorganization.

Critics of the current asbestos litigation regime have proposed a variety of changes in substantive doctrine and procedural rules to limit or reallocate compensation among injury victims or limit costs to defendants. For example, there have been proposals to limit compensation to those who currently demonstrate a significant functional impairment (while preserving others' right to sue in the future), to cap successor liability, to restrict the application of joint and several liability, and to cap punitive damages. There have also been proposals to eliminate or limit trial consolidations. All of these proposals implicate important normative values and many raise federalism questions.

Although the U.S. relies heavily on the tort liability system to compensate victims of accidental injury and disease, on several occasions Congress has adopted an administrative system to substitute for or supplement tort liability. The most recent example is the federal Victims' Compensation Fund for families of those killed in the September 11 terrorist attacks. Over the past several decades, numerous proposals to establish administrative schemes for asbestos victims have been introduced in Congress but none has garnered substantial support. We are continuing to analyze the various options for reform and will present the results of our analysis in our final report.



## **Next Steps**

- **Complete/publish final report**
  - **Document analyses**
  - **Analyze policy alternatives**
- **Estimate individual claimants' recoveries**

A3823-91 08/02 RAND

The next step in the research is to complete and publish the final report on the project. Completion of the work will entail documenting in some detail the analyses we conducted to arrive at the results presented in this briefing. We will also analyze the policy alternatives listed in the previous box in terms of their likely effects on major stakeholders in the litigation.

We currently expect to complete the draft and submit it to reviewers before the end of the year. The published report will be distributed in early 2003.

We have already begun work on a follow-on study. We are developing estimates of the amounts individual claimants recover from all defendants. We will examine trends and patterns in claimants' recoveries according to their claimed injuries and the jurisdictions in which they pursued their claims.

## BIBLIOGRAPHY

Alleman, James and Brooke Mossman, "Asbestos Revisited," *Scientific American*, July 1997, pp. 70-75.

Altonji, Gerard, Karen Horvath, and Eric Simpson, *Asbestos Claims Surge Set to Dampen Earnings for Commercial Insurers*, Special Report, A.M. Best Company, Inc., Oldwick, NJ, May 7, 2001.

American Medical Association, *Guides to the Evaluation of Permanent Impairment*, Fifth Edition, 2000.

American Thoracic Society, "The Diagnosis of Nonmalignant Diseases Related to Asbestos: 1986 Update: Official Statement of the American Thoracic Society," *American Review of Respiratory Disease*, Vol. 134, 1986, pp. 363-368.

Anderson, H., et al., "Mesothelioma Among Employees With Likely Contact with In-Place Asbestos-Containing Building Materials," *Annals of the New York Academy of Sciences*, Vol. 643, 1991, pp. 550-571.

Angelina, Michael and Jennifer Biggs, *Asbestos Claims: Is This the Beginning or the End?* Casualty Actuaries of the Mid-Atlantic, Annual Conference, May 30, 2001.

Austern, David, *Memorandum to Manville Trust Claimants*, Claims Resolution Management Corporation, Fairfax, VA, June 21, 2001.

---

, *Memorandum to Attorneys Who File Manville Trust Claims*, Claims Resolution Management Corporation, Fairfax, VA, July 5, 2001.

---

, The Manville Trust Experience, *Mealey's Asbestos Bankruptcy Conference 2001*, Claims Resolution Management Corporation, Fairfax, VA, 2001.

---

, David, *Letter to Joseph F. Rice*, Claims Resolution Management Corporation, Fairfax, VA, August 20, 2002.

Banaie, A., et al., "Future Trends in Mortality of French Men from Mesothelioma," *Occupational and Environmental Medicine*, Vol. 57, Vol 7, 2000, pp. 488-94.

Baron, Fred, "An Asbestos Settlement with a Hidden Agenda," *Wall Street Journal*, May 6, 1993, p. A6.

Bernick, David M., et al., Debtors' Consolidated Reply in Support of Their Motion for Entry of Case Management Order, Establishment of a Bar Date, Approval of the Claim Forms and approval of the Notice Program, United States Bankruptcy Court for the District of Delaware, November 9, 2001.

Bernick, David M., et al., *Road map to B&W's defenses to asbestos personal injury claims*, United States district court for the Eastern district of Louisiana, October 18, 2001.

Bhagavatula, Raji, Rebecca Moody, and Jason Russ, "Asbestos: A Moving Target," *Best's Review*, Vol. 102(5), September 2001, pp. 85–90.

Brodeur, Paul, *Outrageous Misconduct: The Asbestos Industry On Trial*, New York, Pantheon, 1985.

Cabraser, Elizabeth, Life After Amchem: The Class Struggle Continues, *Loyola Law Review*, Vol. 31, 1998, pp. 373–394.

Castleman, Barry, *Asbestos: Medical And Legal Aspects*, 4<sup>th</sup> edition, Englewood Cliffs, NJ, *Aspen Law & Business*, 1996.

Cauchon, Dennis, "The Asbestos Epidemic: An Emerging Catastrophe," *USA Today*, Feb. 8, 1999, pp. 1-7.

Chambers, Letitia, "Where is the Asbestos Litigation Going?" *The Wall Street Forum: Asbestos*, Mealey Publications, New York, July 18, 2002.

Chin, Audrey and Mark Peterson, *Deep Pockets, Empty Pockets: Who Wins In Cook County Jury Trials*, Santa Monica, CA, RAND, R-3249-ICJ, 1985.

Claims Resolution Management Corporation, *Manville Personal Injury Settlement Trust: Selected Operations Data For Presentation at Courts Hearing*, Claims Resolution Management Corporation, Fairfax, VA, Dec. 13, 2001.

Cole, G. Marcus, "A Calculus without Consent: Mass Tort Bankruptcies, Future Claimants, and the Problem of Third Party Non-Debtor 'Discharge,'" *Iowa Law Review*, Vol. 84, 1999, pp. 753–800.

Cross, Susan and John Doucette, *Measurement of Asbestos Bodily Injury Liabilities*, Proceedings of the Casualty-Actuarial Society, Vol. 84, 1997, pp. 187–300.

Daley, Christine and Jane Castle, *Distressed Digest: Special Asbestos Issue*, Lehman Brothers, November 28, 2000.

Debtor's Consolidated Reply in Support of Their Motion for Entry of Case Management Order, Establishment of a Bar Date, Approval of the Claim Forms and Approval of the Notice Program, *In re W.R. Grace Co.*, Ch. 11 Case No. 01-01139 (Bankr. D. Del. filed April 2, 2001).

Diamond, Shari, Michael Saks and Stephan Landsman, "Juror Judgments about Liability and Damages: Sources of Variability and Ways to Increase Consistency," *DePaul Law Review*, Vol. 48, 1998, pp. 301–353.

Edley, Christopher F., Jr., and Paul C. Weiler, "Asbestos: A Multi-Billion Dollar Crisis," 30 *Harv.J.Legis.*, Vol. 30, Summer 1993, 383–408.

Fazzari, S.M., R. G. Hubbard, and B.C. Petersen, *Financing Constraints and Corporate Investment*, Brookings Papers on Economic Activity, Number 1, 1988.

Fitzpatrick, Lawrence, The Center for Claims Resolution, *Law and Contemporary Problems*, Vol. 53, 1990, pp. 13–26.

Franks, Julian and Walter Torous, An Empirical Investigation of U.S. Firms in Reorganization, *Journal of Finance*, Vol. 44, 1989, pp. 747–69.

Green, Michael, *Bendectin and Birth Defects: The Challenges of Mass Toxic Substances Litigation*, Philadelphia: University of Pennsylvania Press, 1996.

Hensler, Deborah, “Fashioning a National Resolution of Asbestos Personal Injury Litigation: A Reply to Professor Brickman,” *Cardozo Law Review*, Vol. 13, 1992, pp. 1967–1990.

\_\_\_\_\_, “A Glass Half Full, A Glass Half Empty: The Use of Alternative Dispute Resolution in Mass Personal Injury Litigation,” *Texas Law Review*, Vol. 73, 1995, pp. 1587–1626.

\_\_\_\_\_, “The Real World of Tort Litigation,” in Austin Sarat et al., eds., *Everyday Practices and Trouble Cases*, Evanston, IL, Northwestern University Press, 1998.

Hensler, Deborah, “The Role of Multi-Districting in Mass Tort Litigation: An Empirical Investigation,” *Seton Hall Law Review*, Vol. 31(4), 2001, PP. 883-906.

\_\_\_\_\_, “Revisiting the Monster: New Myths and Realities of Class Action and Other Large-Scale Litigation,” *Duke Journal of Comparative and International Law*, Vol. 11(2), 2001, pp.179-213.

\_\_\_\_\_, “As Time Goes By: Asbestos Litigation After Amchem and Ortiz,” *Texas Law Review*, Vol. 80(7), 2002, pp. 1899-1924.

Hensler, Deborah and Mark Peterson, “Understanding Mass Personal Injury Litigation: A Socio-Legal Analysis,” *Brooklyn Law Review*, Vol. 59, 1993, pp. 961–1064.

Hensler, Deborah, M. Susan Marquis, Allan F. Abrahamse, Sandra H. Berry, Patricia A. Ebener, Elizabeth Lewis, E. Allan Lind, Robert J. MacCoun, Willard G. Manning, Jeannette A. Rogowski, and Mary E. Vaiana, *Compensation for Accidental Injuries In The United States*, Santa Monica, CA, RAND, R-3999-HHS/ICJ, 1991.

Hensler, Deborah, Nicholas M. Pace, Bonnie Dombey-Moore, Elizabeth Giddens, Jennifer Gross, and Erik Moller, *Class Action Dilemmas: Pursuing Public Goals For Private Gain*, Santa Monica, CA, RAND, MR-969-ICJ, 2000.

Hensler, Deborah, William L.F. Felstiner, Molly Selvin and Patricia A. Ebener, *Asbestos in the Courts: The Challenge Of Mass Toxic Tort Litigation*, Santa Monica, CA, RAND, R-3324-ICJ, 1985.

Kakalik, James and Nicholas Pace, *Costs and Compensation Paid In Tort Litigation*, Santa Monica, CA, RAND, R-3391-ICJ, 1986.

Kakalik, James, Michael G. Shanley, William L. F. Felstiner, and Patricia A. Ebener, *Costs of Asbestos Litigation*, Santa Monica, CA, RAND, R-3042-ICJ, 1983.

Kakalik, James, Patricia A. Ebener, William L. F. Felstiner, Gus W. Haggstrom, and Michael G. Shanley, *Variation in Asbestos Litigation Compensation And Expenses*, Santa Monica, CA, RAND, R-3132-ICJ, 1984.

Keating, Gregory, "Distributive and Corrective Justice in the Tort Law of Accidents," *Southern California Law Review*, Vol. 74, 2000, 193-224.

Kjaergaard, J., and M. Andersson, "Incidence Rates of Malignant Mesothelioma in Denmark and Predicted Future Numbers of Cases Among Men," *Scandinavian Journal of Work and Environmental Health*, Vol. 26(2), 2000, pp. 112-117.

Lynch, Merrill, *Asbestos Panel Presentation*, Annual High Yield Conference, (Presentations by Andrew Berry, Joseph Cox, Robert Drain and Francine Rabinovitz), December 18, 2000.

Magnani, C., et al., "Multicentric Study on Malignant Pleural Mesothelioma and Non-Occupational Exposure to Asbestos," *British Journal of Cancer*, Vol. 83(1), 2000, pp.104-111.

Manville Personal Injury Settlement Trust, Claims Resolution Management Corporation, *Selected Operations Data for Presentation at Courts Hearing*, December 13, 2001.

Manville Personal Injury Settlement Trust, *Financial Statements and Report for the period ending September 30, 2000, In re Johns Manville*, Andrews Asbestos LR, Document Section D, 2000.

McGovern, Francis E., "Toward a Functional Approach for Managing Complex Litigation," *University of Chicago Law Review*, Vol. 53, 1986, pp. 440-493.

\_\_\_\_\_, "Resolving Mature Mass Tort Litigation," *Boston University Law Review*, Vol. 69, 1989, pp. 659-694.

\_\_\_\_\_, "Issues in Civil Procedure: Advancing The Dialogue. A Symposium: Resolving Mature Mass Tort Litigation," *Boston University Law Review*, Vol. 69, 1989, pp. 659- .

\_\_\_\_\_, "Symposium: National Mass Tort Conference: An Analysis of Mass Torts for Judges," *73 Texas Law Review*, Vol. 73, 1995, pp. 1821- .

\_\_\_\_\_, "Rethinking Cooperation Among Judges in Mass Tort Litigation," *UCLA Law Review*, Vol. 44, 1997, pp. 1851-1870.

National Center for State Courts, *Examining the Work of State Courts, 2001*, Williamsburg: National Center for State Courts, 2001.

Nicholson, William, et al., "Occupational Exposure to Asbestos: Population at Risk and Projected Mortality 1980-2030," *American Journal of Industrial Medicine*, Vol. 3, 1982, pp. 259-311.

Ostrom, Brian, et al., "A Step Above Anecdote: A Profile of the Civil Jury in the 1990s," *Judicature*, Vol. 79, 1996, pp. 233-241.

- Ostrom, Brian, et al., "What Are Tort Awards Really Like? The Untold Story from the State Courts," *Law & Policy*, Vol. 14, 1992, pp. 77–106.
- Peterson, Mark and Molly Selvin, Mass Justice: "The Limited and Unlimited Power of Courts," *Law and Contemporary Problems*, Vol. 54(3), 1991, pp. 227–247.
- Peterson, Mark, "Giving Away Money: Comparative Comments on Claims Resolution Facilities," *Law and Contemporary Problems*, Vol. 53, 1990, pp. 113–136.
- Peto, J., et al., "The European Mesothelioma Epidemic," *British Journal of Cancer*, Vol. 79(304), 1999, pp. 666-672.
- Price, B., "Analysis of Current Trends in United States Mesothelioma," *American Journal of Epidemiology*, Vol. 145, 1997, pp. 211-218.
- Renner, Rebecca, "Asbestos in the Air," *Scientific American*, February 21, 2000.
- Rheingold, Paul, *Mass Tort Litigation*, Deerfield, IL, Clark, Boardman, Callaghan, 1996.
- Road Map to B&W's Defenses to Asbestos Personal-Injury Claims, *In re Babcock & Wilcox Co.*, 2001 U.S. Dist. LEXIS 16741 (E.D. La. 2001) (No. 00-0588), 2001.
- Rothstein, Paul F., "What Courts Can Do In the Face of the Never Ending Asbestos Crisis," *Mississippi Law Review*, Vol. 71(1), Fall 2001, pp. 1-34.
- Rourke, Daniel L., "1997 and 2000 Grace Asbestos PI Claims Sample Design, Methodology and Results," Appendix K, Debtors' Consolidated Reply in Support of their Motion for Entry of Case Management Order, Establishment of a Bar Date, Approval of the Claim Forms and Approval of the Notice Program, United States Bankruptcy Court for the District Of Delaware, November 9, 2001,
- Saks, Michael, and Peter Blanck, "Justice Improved: The Unrecognized Benefits of Aggregation and Sampling in the Trial of Mass Torts," *Stanford Law Review*, Vol. 44, 1992, pp. 815-.
- Schuck, Peter H., "The Worst Should Go First: Deferral Registries in Asbestos Litigation," *Judicature*, Vol. 75, 1992, pp. 318–328.
- Schwartz, Gary, "Mixed Theories of Tort Law: Affirming Both Deterrence and Corrective Justice," *Texas Law Review*, Vol. 75, 1997, pp. 1801–1834.
- Selikoff, I., E. Hammond and J. Churg, "Asbestos Exposure and Neoplasia," *Journal of the American Medical Association*, Vol. 188, April 1954, pp. 22-26.
- Selikoff, I., J. Churg, and E. Hammond, "The Occurrence of Asbestosis Among Insulation Workers in the United Sates, *Annals of the New York Academy of Sciences*, Vol. 132, 1965, pp. 139-155.
- Selikoff, Irving and Douglas Lee, *Asbestos and Disease*, New York, Academic Press, 1978.

Selikoff, Irving, *Disability Compensation for Asbestos-Related Disease in the United States*, U.S. Department of Labor, June 1982.

Selvin, Molly, and Larry Picus, *The Debate over Jury Performance: Observations from a Recent Asbestos Case*, RAND, Santa Monica, CA. 1987.

Shanley, Michael and Mark A. Peterson, *Comparative Justice: Civil Jury Verdicts in San Francisco and Cook Counties, 1959-1980*, Santa Monica, CA, RAND, R-3006-ICJ, 1983.

Smith, Marianna, "Resolving Asbestos Claims: The Manville Personal Injury Settlement Trust," *Law and Contemporary Problems*, Vol. 53, 1990, pp. 27-36.

Sobol, Richard, *Bending the Law: The Story of the Dalkon Shield Bankruptcy*, Chicago: University of Chicago Press, 1991.

Spirtas, R., "Malignant Mesothelioma: Attributable Risk of Asbestos Exposure," *Occupational and Environmental Medicine*, Vol. 51, 1994, pp. 804-811.

Stallard, E., "Product Liability Forecasting for Asbestos-Related Personal Injury Claims: A Multidisciplinary Approach," Unpublished Manuscript. Copyright 2001 by the New York Academy of Sciences.

Symposium, *Mass Tortes: Serving Up Just Deserts*, Cornell University Law Review, Vol. 80, 1995.

Trangsrud, Roger, "Mass Trials in Mass Tort Cases: A Dissent," *University of Illinois Law Review*, Vol. 1989, 1989, pp. 69- .

Tweedale, Geoffrey, *Magic Mineral to Killer Dust: Turner and Newall and the Asbestos Hazard*, Oxford, Oxford University Press, 2000.

Tyler, Tom, "A Psychological Perspective on the Settlement of Mass Tort Claims," *Law and Contemporary Problems*, Vol. 53, 1990, pp. 199-205.

U.S. Department of the Census, 2000, *Statistical Abstract of the United States: The National Data Book, 120th edition*, 2000, Washington, DC.

U.S. Environmental Protection Agency, *EPA Asbestos Materials Ban: Clarification, May 18, 1999*.

Walker, A., et al., "Projections of Asbestos-Related Disease 1980-2009," *Journal of Occupational Medicine*, Vol. 25(5), 1983, pp. 409-425.

Weinstein, Jack, *Individual Justice In Mass Tort Litigation: The Effect Of Class Actions, Consolidations and Other Multiparty Devices*, Evanston, IL, Northwestern University Press, 1995.

Weiss, Lawrence, "Bankruptcy Resolution: Direct Costs and Violation of Priority of Claims," *Journal of Financial Economics*, Vol. 27, 1990, pp. 285-314.

White, Michelle, "Survey Evidence on Business Bankruptcy," in J. Bhandari and L. Weiss, eds., *Corporate Bankruptcy: Economic And Legal Perspective*, 1996.

Willging, Thomas, *Asbestos Case Management: Pretrial And Trial Procedures*, Washington, D.C., Federal Judicial Center, 1985.